INDEX

ABEL, J. J. Crystalline Insulin, 132.
Abelian groups (Miller), 470.
Absorption of X-rays (Havighurst), 477.
Absorption of N—H bond (Salant), 74.
Acknowledgment (Hotelling), 773.
Acoustic pressures (Barus), 480, 482.
Activated molecules (Wulf), 129.
ADAMS, L. H., AND GIBSON, R. E. The Compressibilities of Dunite and of Basalt Glass and Their Bearing on the Composition of the Earth, 275.
Adsorption (Bray and Draper), 295.
Aggregation of atoms (Jauncey and Hughes), 169.
Air, Joule-Thomson effect (Roebuck), 55.
Alcohol metabolism (Carpenter), 415.
Aliphatic crystals, heat capacity (Salant), 370.
ALLEN, C. E. The Direct Results of Mendelian Segregation, 2.
ALLISON, S. K. Note on the "Selective Reflection" of X-rays by Crystals of Potassium Bromide, 143.
Amoeba proteus (Hopkins), 311.
Ammonia, decomposition of (Dickinson and Mitchell), 692.
Ammonia-hydrogen mixtures (Loeb), 677.
Andromede meteors (Fisher), 728.
Aplocheilus latipes (Goodrich), 649.
Apple scab (Keitt), 68.
Argon, spectrum of (Saunders), 556.
Atomic dynamics (Bramley), 653.
Atomic hydrogen (Langer), 639, 644.
Atomic number 61 (Cork, James and Fogg), 696.
Atomic weight of helium (Baxter and Starkweather), 20.
Atomic weight of nitrogen (Baxter and Starkweather), 703.
Atoms and electrons (Zwicky), 466.
Atoms, disintegration and aggregation (Jauncey and Hughes), 169.
Atoms, stripped (Gibbs and White), 448, 551, 598.
Atoms, synthesis and disintegration (Harkins and Shadduck), 707.
Atmosphere, solar (Hale), 286.

Band spectrum, hydrogen (Witmer), 238.
Band-spectrum structure (Mulliken), 144, 151, 338.
BARRETT, S. B. See Frost, E. B., 283.
BARTON, H. Generalization of Kronecker's Relation among the Minors of a Symmetric Determinant, 393.
BARUS, C. Resonant Acoustic and Electric Oscillations Released by the Relatively Slow Spring Break, 137.
——. Mutually Counteracting Pinhole Probes, 223.
——. Acoustic Pressures in Case of Soap Bubbles, 480.
——. Acoustic Pressure Promoted by Coöperating Quill Tubes without Pinholes, 482.
Basalt glass (Adams and Gibson), 275.
BATES, J. R. See Taylor, H. S., 714.
BAXTER, G. P., AND STARKWEATHER, H. W. The Density and Atomic Weight of Helium. II, 20.
——. The Density, Compressibility and Atomic Weight of Nitrogen, 703.
——. The Density of Oxygen and Its Compressibility below One Atmosphere. II, 699.
BELLING, J., AND BLAKESLEE, A. F. On the Attachment of Non-Homologous Chromosomes at the Reduction Division in Certain 25-Chromosome Daturas, 7.
BICHOWSKY, F. R., AND UREY, H. C. A Possible Explanation of the Relativity Doublets and Anomalous Zeeman Effect by Means of a Magnetic Electron, 80.
Bielid meteors (Fisher), 728.
Binary system (Brown), 1.
Biochemical differences (Satina and Blakeslee), 191, 197.
Bioluminescence (Ladd-Franklin), 413.
BIRGE, E. A., AND JUDAY, C. The Organic Content of Lake Water, 515.
Black body radiation isotherm (Bruzs), 233.
BLAKESLEE, A. F., AND CARTLEDGE, J. L. Pollen Abortion in Chromosomal Types of Datura, 315.
——. See Belling, J., 7.
——. See Satina, S., 191, 197, 202.
Blindness in the house mouse (Keeler), 255.
Blood volume, cost of (Murray), 207.
BOVARD, J. F. See Rand, H. W., 565.
BRAMLEY, A. Maxwell's Equations and Atomic Dynamics, 653.
BRASEFIELD, C. J. See Smyth, H. D., 443.
BRAY, W. C., AND DRAPER, H. C. Capillary Condensation and Adsorption, 295.
BREIT, G. The Electromagnetic Mass and Momentum of a Spinning Electron, 451.
BREWER, A. KEITH. Ionization in Reacting Gases, 560.
BRIEGER, F. G., AND MANGELSDORF, A. J. Linkage between a Flower Color Factor and Self-Sterility Factors, 248.
BROWNE, A. See Rand, H. W., 575.
BROWN, E. W. The Effect of Varying Mass on a Binary System: A Correction, 1.

INDEX

ABEL, J. J. Crystalline Insulin, 132.
Abelian groups (Miller), 470.
Absorption of X-rays (Havighurst), 477.
Absorption of N—H bond (Salant), 74.
Acknowledgment (Hotelling), 773.
Acoustic pressures (Barus), 480, 482.
Activated molecules (Wulf), 129.
ADAMS, L. H., AND GIBSON, R. E. The Compressibilities of Dunite and of Basalt Glass and Their Bearing on the Composition of the Earth, 275.
Adsorption (Bray and Draper), 295.
Aggregation of atoms (Jauncey and Hughes), 169.
Air, Joule-Thomson effect (Roebuck), 55.
Alcohol metabolism (Carpenter), 415.
Aliphatic crystals, heat capacity (Salant), 370.
ALLEN, C. E. The Direct Results of Mendelian Segregation, 2.
ALLISON, S. K. Note on the "Selective Reflection" of X-rays by Crystals of Potassium Bromide, 143.
Amoeba proteus (Hopkins), 311.
Ammonia, decomposition of (Dickinson and Mitchell), 692.
Ammonia-hydrogen mixtures (Loeb), 677.
Andromede meteors (Fisher), 728.
Aplocheilus latipes (Goodrich), 649.
Apple scab (Keitt), 68.
Argon, spectrum of (Saunders), 556.
Atomic dynamics (Bramley), 653.
Atomic hydrogen (Langer), 639, 644.
Atomic number 61 (Cork, James and Fogg), 696.
Atomic weight of helium (Baxter and Starkweather), 20.
Atomic weight of nitrogen (Baxter and Starkweather), 703.
Atoms and electrons (Zwicky), 466.
Atoms, disintegration and aggregation (Jauncey and Hughes), 169.
Atoms, stripped (Gibbs and White), 448, 551, 598.
Atoms, synthesis and disintegration (Harkins and Shadduck), 707.
Atmosphere, solar (Hale), 286.

Band spectrum, hydrogen (Witmer), 238.
Band-spectrum structure (Mulliken), 144, 151, 338.
BARRETT, S. B. See Frost, E. B., 283.
BARTON, H. Generalization of Kronecker's Relation among the Minors of a Symmetric Determinant, 393.
BARUS, C. Resonant Acoustic and Electric Oscillations Released by the Relatively Slow Spring Break, 137.
——. Mutually Counteracting Pinhole Probes, 223.
——. Acoustic Pressures in Case of Soap Bubbles, 480.
——. Acoustic Pressure Promoted by Coöperating Quill Tubes without Pinholes, 482.
Basalt glass (Adams and Gibson), 275.
BATES, J. R. See Taylor, H. S., 714.
BAXTER, G. P., AND STARKWEATHER, H. W. The Density and Atomic Weight of Helium. II, 20.
——. The Density, Compressibility and Atomic Weight of Nitrogen, 703.
——. The Density of Oxygen and Its Compressibility below One Atmosphere. II, 699.
BELLING, J., AND BLAKESLEE, A. F. On the Attachment of Non-Homologous Chromosomes at the Reduction Division in Certain 25-Chromosome Daturas, 7.
BICHOWSKY, F. R., AND UREY, H. C. A Possible Explanation of the Relativity Doublets and Anomalous Zeeman Effect by Means of a Magnetic Electron, 80.
Bielid meteors (Fisher), 728.
Binary system (Brown), 1.
Biochemical differences (Satina and Blakeslee), 191, 197.
Bioluminescence (Ladd-Franklin), 413.
BIRGE, E. A., AND JUDAY, C. The Organic Content of Lake Water, 515.
Black body radiation isotherm (Bruzs), 233.
BLAKESLEE, A. F., AND CARTLEDGE, J. L. Pollen Abortion in Chromosomal Types of Datura, 315.
——. See Belling, J., 7.
——. See Satina, S., 191, 197, 202.
Blindness in the house mouse (Keeler), 255.
Blood volume, cost of (Murray), 207.
BOVARD, J. F. See Rand, H. W., 565.
BRAMLEY, A. Maxwell's Equations and Atomic Dynamics, 653.
BRASEFIELD, C. J. See Smyth, H. D., 443.
BRAY, W. C., AND DRAPER, H. C. Capillary Condensation and Adsorption, 295.
BREIT, G. The Electromagnetic Mass and Momentum of a Spinning Electron, 451.
BREWER, A. KEITH. Ionization in Reacting Gases, 560.
BRIEGER, F. G., AND MANGELSDORF, A. J. Linkage between a Flower Color Factor and Self-Sterility Factors, 248.
BROWNE, A. See Rand, H. W., 575.
BROWN, E. W. The Effect of Varying Mass on a Binary System: A Correction, 1.

——. The Evidence for Changes in the Rate of Rotation of the Earth and Their Geophysical Consequences, 406.
BRUZS, B. Thermodynamic Derivation of a Black Body Radiation Isotherm, 233.

Cadmium, energy levels (MacNair), 555.
Caesium-like doublets (Gibbs and White), 551.
Calcium fluorides (Havighurst), 380.
Capillaries, oxygen exchange (Murray), 299.
Capillary condensation and adsorption (Bray and Draper), 295.
CARPENTER, T. M. The Metabolic Effect of Enemata of Alcohol, Dextrose and Levulose in Humans, 415.
CARTLEDGE, J. L. See Blakeslee, A. F., 315.
CASTLE, W. E. The Explanation of Hybrid Vigor, 16.
Characteristic radiation (Duane), 140.
Chemical reaction (Wulf), 129.
Chest-girth and stature (Frassetto), 583.
Chromium, doublets (Gibbs and White), 675.
Chromosomes in Sciara (Metz), 690.
Chromosomes, non-homologous (Belling and Blakeslee), 7.
Chromosomes, shape and behavior (Morgan), 180.
Chromosome types of datura (Blakeslee and Cartledge), 315.
Class *c F8* stars (Payne), 722.
COHN, E. J., AND CONANT, J. B. The Molecular Weights of Proteins in Phenol, 433.
Color factor of a flower (Brieger and Mangelsdorf), 248.
Compounds, heat capacity (Salant), 334.
Compressibilities of dunite and basalt glass (Adams and Gibson), 275.
Compressibility of nitrogen and oxygen (Baxter and Starkweather), 699, 703.
COMPTON, K. T. Interpretation of Deviations from Ohm's Law, 548.
CONANT, J. B. See Cohn, E. J., 433.
Concentration and identification of element of atomic number 61 (Cork, James and Fogg), 696.
Condensation, capillary (Bray and Draper), 295.
CONDON, E. Remarks on Penetrating Radiation, 323.
Conduction, metallic (Hall), 326.
Conformal geometry (Thomas), 352.
Conformal invariants (Thomas), 389.
Congruences of parallelism (Eisenhart), 757.
Continua (Moore), 359.
Continuous curves (Whyburn), 761.
Coördinates, normal (Thomas), 58.
CORK, J. M., JAMES, C., AND FOGG, H. C. The Concentration and Identification of the Element of Atomic Number 61, 696.
Correlation between shape and behavior of a chromosome (Morgan), 180.
Correspondence principle (Tolman and Badger), 173.
Cosmic origin of high frequency rays (Millikan), 48.
Critical potentials of hydrogen (Witmer), 238.
Crossing-over in drosophila melanogaster (Stern), 530.
CROZIER, W. J., AND PINCUS, G. Tropisms of Mammals, 612.
Crystalline compounds and X-rays (Havighurst), 477.
Crystalline insulin (Abel), 132.
Crystals, heat capacity (Salant), 370.
Crystals, X-ray reflection (Duane), 140; (Havighurst), 375.
Currents, electron (Lawrence), 29.
Curved space-time (Rainich), 244.
Curved tubes (Hovgaard), 365.
Curves, continuous (Moore), 745; (Whyburn), 761.
Cyanogen bromide (Glockler), 522.

Datura, pollen abortion in (Blakeslee and Cartledge), 315.
Daturas, 25-chromosome (Belling and Blakeslee), 7.
DAVIS, W. M. Subsidence Rate of Reef-Encircled Islands, 99.
Decompositions, photosensitized (Taylor and Bates), 714.
DEMEREC, M. Reddish—A Frequently "Mutating" Character in Drosophila Virilis, 11.
——. Miniature-α—A Second Frequently Mutating Character in Drosophila, 687.
DEMPSTER, A. J. The Free Path of Protons in Helium, 96.
Density of helium (Baxter and Starkweather), 20.
Density of oxygen and nitrogen (Baxter and Starkweather), 699, 703.
Derivatives, functional (Michal), 113.
Determinants, symmetric (Stouffer), 63; (Barton), 393.
Deviations from Ohm's law (Compton), 548.
Dextrose, metabolism (Carpenter), 415.
Diamagnetism of hydrogen and helium (Van Vleck), 662.
Diatomic dipole-gases (Kronig), 488.
Diatomic molecules (Mulliken), 144, 151, 338.
DICKINSON, R. G., AND MITCHELL, A. C. G. Composition of Ammonia by Optically Excited Mercury Atoms, 692.

DICKINSON, R. G., AND SHERRILL, M. S. Formation of Ozone by Optically Excited Mercury Vapor, 175.
DICKSON, L. E. Quadratic Forms Which Represent All Integers, 756.
Dielectric constant (Kronig), 488, 608; (Van Vleck), 662.
Dielectric constant of hydrogen chloride (Pauling), 32.
Diffusion of electrons (Glockler) 178.
Dipole-gases (Kronig), 488, 608.
Dirichlet problem (Kellogg), 397.
Disintegration of atoms (Jauncey and Hughes), 169.
Dispersion of atomic hydrogen (Langer), 639, 644.
DOERING, C. R. See Wilson, E. B., 424.
Doublets of stripped atoms (Gibbs and White), 448, 675.
DRAPER, H. C. See Bray, W. C., 295.
Drosophila melanogaster (Stern), 530.
Drosophila, mutations in (Demerec), 687.
Drosophila virilis (Demerec), 11.
Dual theory of metallic conduction (Hall), 326.
DUANE, W. On the Reflection by a Crystal of Its Own Characteristic Radiation, 140.
DUBRIDGE, L. A. Variations in the Photo-Electric Sensitivity of Platinum, 162.
Dunite (Adams and Gibson), 275.
Dynamics, atomic (Bramley), 653.

Earth and its rotation (Brown), 406.
Earth, composition of the (Adams and Gibson), 275.
ECKART, C. The Solution of the Problem of the Simple Oscillator by a Combination of the Schroedinger and the Lanczos Theories, 473.
——. Note on the Correspondence Principle in the New Quantum Theory, 684.
Ecuador, foraminifera (Vaughan), 533.
Einstein's gravitation and electricity (Eisenhart), 125.
EISENHART, L. P. Einstein's Recent Theory of Gravitation and Electricity, 125.
——. Congruences of Parallelism of a Field of Vectors, 757.
Elasticity of pipes (Hovgaard), 365.
Elder Peirce's (Wilson and Doering), 424.
Electric fields and radiation (Hertel), 440.
Electric oscillations (Barus), 137.
Electrical conductivity (Glockler), 522; (Compton), 548.
Electricity and gravitation (Eisenhart), 125.
Electrical resistance during sleep (Richter), 214.
Electricity and gravitation (Thomas), 187.
Electrolytes, fluorescent (Murdock), 504.
Electrolytes, specific heat (Zwicky), 86.
Electromotive forces (Murdock), 504.
Electromagnetic mass (Breit), 451.
Electron currents (Lawrence), 29.
Electronic structure (Mulliken), 144, 151, 338.
Electrons, diffusion of (Glockler), 178.
Electrons, emission of (Hall), 486.
Electrons in mercury vapor (Maxwell), 509.
Electrons, magnetic (Bichowsky and Urey), 80.
Electrons, magnetic moment (Kronig), 328.
Electrons, quantum theory (Zwicky), 461, 466.
Electrons, spinning (Breit), 451.
Element of atomic number 61 (Cork, James and Fogg), 696.
ELLIS, M. See Rand, H. W., 570
Emission of electrons (Hall), 486.
Endamoeba histolytica (Uribe), 305.
Energy transfers (Zwicky), 461.
Eocene deposits, Ecuador (Vaughan), 533.
Epidemiology of apple scab (Keitt), 68.
EPSTEIN, P. S. On the Evaluation of Certain Integrals in the Theory of Quanta, 629.
——. The New Quantum Theory and the Zeeman Effect, 634.
Equations, functional (Michal), 113.
Equilibrium between radiation and matter (Tolman), 670.
Errata (Salant), 419; (Rand), 773.
Ether drift (Kennedy), 621.
Ether-hydrogen mixtures (Loeb), 617.
ETTLINGER, H. J. On the Zeros of Functions Associated with a Linear System of the Second Order, 540.
Evaluation of quantum integrals (Epstein), 629.
Excited mercury vapor (Dickinson and Sherrill), 175.

Faraday cylinder (Lawrence), 29.
Fermat's last theorem (Vandiver), 106, 767.
Fierasfer at Key West (Parker), 421.
Fine structure, cadmium (MacNair), 555.
FISHER, W. J. The Apparition of the Andromede (or Bielid) Meteor Swarms, 728.
Fluorescent electrolytes (Murdock), 504.
FOGG, H. C. See Cork, J. M., 696.
Foraminifera, Ecuador (Vaughan), 533.
Formative agencies in hydra (Rand, Bovard and Minnich), 565.
FRANKLIN, C. LADD-. See Ladd-Franklin, C., 413.

FRASSETTO, F. Relations between Stature and Chest-Girth Formula of Normality and Normal Values, 583.
Free energy of hydration of ions (Webb), 524.
Free path of protons (Dempster), 96.
FROST, E. B., BARRETT, S. B., AND STRUVE, O. Radial Velocities of 368 Helium Stars, 283.
Functional derivatives (Michal), 113.
Functions, zeros of (Ettlinger), 540.

Gases, dielectric constant (Pauling), 32.
Gases, impact in (Zwicky), 461.
Gases, ion mobilities in (Loeb), 35, 42, 617.
Gases, ionization (Brewer), 560.
Gases, magnetic susceptibility (Hammar), 594.
GEHMAN, H. M. Concerning Irreducibly Connected Sets and Irreducible Continua, 544.
General domains (Kellogg), 397.
Genetic basis of susceptibility to tissue transplants (Strong), 181.
Geometry, conformal (Thomas), 352.
Geometry of paths (Thomas), 117.
Geometry, relativity (Thomas), 187.
Geophysics and the earth's rotation (Brown), 406.
GIBBS, R. C., and WHITE, H. E. Doublets of Stripped Atoms of the Potassium type, 448.
——. Rubidium and Caesium-Like Doublets of Stripped Atoms, 551.
——. Stripped Atoms of the First Long Period, 598.
——. Extension of Doublet Laws in the First Long Period to Chromium and Manganese, 675.
GIBSON, R. E. See Adams, L. H., 275.
GIDDINGS, G. W., AND ROUSE, G. F. Ionization of Mercury Vapor as a Function of the Intensity of Exciting Light, 447.
Glaser Effect (Hammar), 597.
GLOCKLER, G. Diffusion of Electrons, 178.
——. The Electrical Conductivity of Liquid Cyanogen Bromide, 522.
GOODRICH, H. B. The Development of Mendelian Characters in Aplocheilus Latipes, 649.
Grafting in planarians (Rand and Browne), 575.
Gravitation and electricity (Eisenhart), 125.
Gravitational theory (Thomas), 187.
Green plants, sex in (Satina and Blakeslee), 197.
Groups (Manning), 753.
Groups and subgroups (Miller), 269.
Growth of Academy (Pearl), 258.
Growth of turtles (Parker), 421.

HALE, G. E. Visual Observations of the Solar Atmosphere, 286.
HALL, E. H. New Evidence in Favor of a Dual Theory of Metallic Conduction, 326.
——. Note on the Temperature Relations of Photo-Electric Emission and Thermionic Emission of Electrons, 486.
HAMMAR, G. W. A Preliminary Report on the Magnetic Susceptibilities of Some Gases, 594.
——. A Possible Explanation of the "Glaser Effect," 597.
HARKINS, W. D., AND SHADDUCK, H. A. The Synthesis and Disintegration of Atoms as Revealed by the Photography of Wilson Cloud Tracts, 707.
Haut Chagres, Panama (Vaughan), 519.
H_3^+ (Smyth and Brasefield), 443.
HAVIGHURST, R. J. The Effect of Crystal Size upon the Intensity of X-Ray Reflection, 375.
——. The Intensity of Reflection of X-Rays by Lithium, Sodium and Calcium Fluorides, 380.
——. The Absorption of X-Rays in Crystalline Compounds, 477.
Heat capacity (Salant), 334, 370.
Heat, specific (Zwicky), 86.
Helium, dielectric and diamagnetic values (Van Vleck), 662.
Helium, density (Baxter and Starkweather), 20.
Helium, excited (McCurdy), 231.
Helium molecule (Mulliken), 158.
Helium, protons in (Dempster), 96.
Helium stars (Frost, Barrett and Struve), 283.
HERSKOVITS, M. Social Selection in a Mixed Population, 587.
HERTEL, K. L. Effects of an Electric Field upon the Radiating Hydrogen Atom, 440.
High frequency rays (Millikan), 48.
HILLE, E. On Laguerre's Series. First Note, 261; Second Note, 265; Third Note, 348.
History of science (Miller), 538.
HOPKINS, D. L. The Effect of Hydrogen-Ion Concentration on Locomotion and Other Life-Processes in Amoeba Proteus, 311.
HOTELLING, H. Acknowledgment, 773.
HOVGAARD, W. Bending of a Curved Tube of Circular Cross Section, 365.
HOYT, F. C. Transition Probabilities and Principal Quantum Numbers, 227.
HUGHES, A. L. See Jauncey, G. E. M., 169.
Hybrid vigor (Castle), 16.
Hydra (Rand, Bovard and Minnich), 565.
Hydration of ions (Webb), 524.
Hydrogen and H_3^+ (Smyth and Brasefield), 443.
Hydrogen-ammonia mixtures (Loeb), 677.

Hydrogen, atomic (Langer), 639, 644.
Hydrogen, dielectric and diamagnetic values (Van Vleck), 662.
Hydrogen, heat of dissociation (Bruzs), 238.
Hydrogen-ion concentration and amoebae (Hopkins), 311.
Hydrogen, photo-ionization (Mohler), 494.
Hydrogen, radiating (Hertel), 440.

Indecomposable continua (Moore), 359.
Infra-red absorption (Salant), 74.
Inhibition of regeneration in planarians (Rand and Ellis), 570; (Rand and Browne), 575.
Inquiline fish (Parker), 421.
Insulin, crystalline (Abel), 132.
Integers represented by quadratic forms (Dickson), 756.
Integrals in geometry of paths (Thomas), 117.
Interference and quanta (Lewis), 439.
Interference field (Tolman and Smith), 508.
Invariants, conformal (Thomas), 389.
Ionic mobilities (Loeb), 677.
Ionization formula (Payne), 717.
Ionization in reacting gases (Brewer), 560.
Ionization of mercury vapor (Giddings and Rouse), 447.
Ionization potentials in iron (Laporte), 496.
Ions, gaseous (Loeb), 35, 42.
Ions, hydration of (Webb), 524.
Ions, positive (Kunsman), 659.
Iron, spectrum and potentials (Laporte), 496.
Irreducibly connected sets (Gehman), 544.

JAMES, C. See Cork, J. M., 696.
JAUNCEY, G. E. M., AND HUGHES, A. L. Radiation and the Disintegration and Aggregation of Atoms, 169.
Joule-Thomson effect (Roebuck), 55.
JUDAY, C. See Birge, E. A., 515.

KEELER, C. E. On the Occurrence in the House Mouse of a Mendelizing Structural Defect of the Retina Producing Blindness, 255.
KEITT, G. W. Some Relations of Environment to the Epidemiology and Control of Apple Scab, 68.
KELLOGG, O. D. On the Classical Dirichlet Problem for General Domains, 397.
KENNEDY, R. J. A Refinement of the Michelson-Morley Experiment, 621.
Kronecker's relation (Stouffer), 63; (Barton), 393.
KRONIG, R. DE L. The Magnetic Moment of the Electron, 328.
——. A Theorem on Space Quantization, 330.
——. The Dielectric Constant of Diatomic Dipole-Gases on the New Quantum Mechanics, 488.
——. The Dielectric Constant of Symmetrical Polyatomic Dipole Gases on the New Quantum Mechanics, 608.
Krypton, spectrum (Taylor), 658.
KUNSMAN, C. H. Some Thermionic Experiments with a New Source of Positive Ions, 659.

LADD-FRANKLIN, C. The Reddish Blue Arcs and the Reddish Blue Glow of the Retina; Seeing Your Own Nerve Currents through Bioluminescence, 413.
Laguerre's series (Hille), 261, 265, 348.
Lake water (Birge and Juday), 515.
Lanczos theory (Eckart), 473.
LANGER, R. M. The Dispersion of Atomic Hydrogen. I—A Measure, 639.
——. The Dispersion of Atomic Hydrogen. II—A Calculation, 644.
LAPORTE, O. Series and Ionization Potentials in the Iron Spectrum, 496.
Larval stages in a protozoon (Metcalf), 734.
LAWRENCE, E. O. The Rôle of the Faraday Cylinder in the Measurement of Electron Currents, 29.
LEFSCHETZ, S. Transformations of Manifolds with a Boundary, 737.
Lepidocyclina chaperi (Vaughan), 519.
Levulose, metabolism (Carpenter), 415.
LEWIS, G. N. The Nature of Light, 22.
——. The Path of Light Quanta in an Interference Field, 439.
Lewis on light (Tolman and Smith), 508.
Light and mercury vapor (Giddings and Rouse), 447.
Light, nature of (Lewis), 22; (Tolman and Smith), 343.
Light quanta (Lewis), 439; (Tolman and Smith), 508.
Linear systems of second order (Ettlinger), 540.
Linkage, color and self-sterility (Brieger and Mangelsdorf), 248.
Liquid cyanogen bromide (Glockler), 522.
Lithium fluorides (Havighurst), 380.
Localization of formative agencies in hydra (Rand, Bovard and Minnich), 565.
Locomotion in amoebae (Hopkins), 311.
LOEB, L. B. The Mobility of Gaseous Ions in HCl Gas and HCl Air Mixtures, 35.
——. The Mobility of Gas Ions in HCl Mixtures and the Nature of the Ion, 42.

——. Gas Ion Mobilities in Ether-Hydrogen Mixtures, 617.
——. Ionic Mobilities in Ammonia-Hydrogen Mixtures and an Anomalous Effect of Ammonia, 677.
Lorentz transformations (Slavenas), 739.
LYMAN, T., AND SAUNDERS, F. A. The Spectrum of Neon in the Extreme Ultra-Violet, 92.

McCURDY, W. H. Absorption and Resonance Radiation in Excited Helium and the Structure of the 3889 Line, 231.
MACNAIR, W. A. The Fine Structure of Certain Lines and Energy Levels of Cadmium, 555.
Magnetic electrons (Bichowsky and Urey), 80.
Magnetic moment (Kronig), 328.
Magnetic susceptibilities of gases (Hammar), 594.
Mammals, tropisms (Crozier and Pincus), 612.
Manganese, doublets (Gibbs and White), 675.
MANGELSDORF, A. J. See Brieger, F. G., 248.
Manifolds, transformations of (Lefschetz), 737.
MANNING, W. A. On Simply Transitive Primitive Groups, 753.
Manoilov reaction (Satina and Blakeslee), 191.
Mass in binaries (Brown), 1.
Mass in relativity (Rainich), 110.
Mass of electrons (Breit), 451.
Matrix quantum dynamics (Van Vleck), 385.
Matter and radiation (Tolman), 670.
MAXWELL, L. R. The Mean Free Path of Electrons in Mercury Vapor, 509.
Maxwell's equations (Bramley), 653.
Mean free paths (Maxwell), 509.
Mechanics, new quantum (Van Vleck), 662.
Mendelian characters in Aplocheilus latipes (Goodrich), 649.
Mendelian segregation (Allen), 2.
Mendelizing structural defect of mouse (Keeler), 255.
Mercury atoms, excited (Dickinson and Mitchell), 692.
Mercury atoms, excited (Taylor and Bates), 714.
Mercury vapor, electrons in (Maxwell), 509.
Mercury vapor, excited (Dickinson and Sherrill), 175.
Mercury vapor, ionization (Giddings and Rouse), 447.
Metabolic effects of alcohol (Carpenter), 415.
Metallic conduction (Hall), 326.
METCALF, M. M. Larval Stages in a Protozoon, 734.
Meteor swarms (Fisher), 728.
METZ, C. W. Genetic Evidence of a Selective Segregation of Chromosomes in Sciara (Diptera), (Metz), 690.
MICHAL, A. Concerning Certain Solvable Equations with Functional Derivatives, 113.
Michelson-Morley experiment (Kennedy), 621.
MILLER, G. A. Groups Containing a Relatively Small Number of Sylow Subgroups, 269.
——. Form of the Number of the Prime Power Subgroups of an Abelian Group, 470.
——. Postulates in the History of Science, 538.
MILLIKAN, R. A. High Frequency Rays of Cosmic Origin, 48.
Miniature-α drosophila virilis (Demerec), 687.
Minimum work in physiology (Murray), 207, 299.
MINNICH, D. E. See Rand, H. W., 565.
MITCHELL, A. C. G. See Dickinson, R., 692.
Mobilities of gas ions (Loeb), 617.
MOHLER, F. L. A Photo-Ionization Experiment with Hydrogen, 494.
Molecular weights, proteins (Cohn and Conant), 433.
Molecules, activated (Wulf), 129.
Molecules, diatomic (Mulliken), 144, 151, 338.
Molecules, rotation of (Witmer), 602.
MOORE, R. L. Concerning Indecomposable Continua and Continua Which Contain No Subsets That Separate the Plane, 359.
——. Concerning Paths That Do Not Separate a Given Continuous Curve, 745.
MORGAN, L. V. Correlation between Shape and Behavior of a Chromosome, 180.
Mouse, house (Keeler), 255.
Mucors (Satina and Blakeslee), 191, 202.
MULLIKEN, R. S. Systematic Relations between Electronic Structure and Band-Spectrum Structure in Diatomic Molecules. I, 144.
——. Systematic Relations between Electronic Structure and Band-Spectrum Structure in Diatomic Molecules. II. The ZnH, CdH and HgH Molecules and Their Spectra, 151.
——. The Electronic States of the Helium Molecule, 158.

——. Systematic Relations between Electronic Structure and Band-Spectrum Structure in Diatomic Molecules. III. Molecule Formation and Molecular Structure, 338.
MURDOCK, C. C. The Location of the Electromotive Force in a Photoactive Cell Containing a Fluorescent Electrolyte, 504.
MURRAY, C. D. The Physiological Principle of Minimum Work. I. The Vascular System and the Cost of Blood Volume, 207.
——. The Physiological Principle of Minimum Work. II. Oxygen Exchange in Capillaries, 299.
Mutating characters in drosophila (Demerec), 687.
Mutation in drosophila virilis (Demerec), 11.

NATIONAL ACADEMY, vital statistics (Pearl), 258.
Nature of light (Lewis), 22; (Tolman and Smith), 343.
Neon, spectrum (Lyman and Saunders), 92.
Nerve currents (Ladd-Franklin), 413.
New quantum theory (Eckart), 684.
Nitrogen, density and atomic weight (Baxter and Starkweather), 703.
Non-homologous chromosomes (Belling and Blakeslee), 7.
Non-polar solid compounds (Salant), 334.
Normal coördinates (Thomas), 58.
Nuclear division (Uribe), 305.
Number theory (Vandiver), 106, 767.
N—H bond (Salant), 74.

Ohm's law (Compton), 548.
Optically excited mercury atoms (Dickinson and Mitchell), 692.
Organic content of lake water (Birge and Juday), 515.
Oscillators and quantum theory (Eckart), 473.
Oxygen, density (Baxter and Starkweather), 699.
Oxygen exchange in capillaries (Murray), 299.
Ozone (Dickinson and Sherrill), 175.

Panama, Haut Chagres (Vaughan), 519.
Parallelism of a field of vectors (Eisenhart), 757.
Parasite parasitella (Satina and Blakeslee), 202.
PARKER, G. H. The Inquiline Fish Fierasfer at Key West, Florida, 422.
——. The Growth of Turtles, 422.
Paths and continuous curves (Moore), 745.
Paths, geometry of (Thomas), 58, 117.
PAULING, L. The Quantum Theory of the Dielectric Constant of Hydrogen Chloride and Similar Gases, 32.
PAYNE, C. H. Some Applications of the Ionization Formula, 717.
——. On the Spectra of Stars of Class *c F8*, 722.
PEARL, R. Vital Statistics of the NATIONAL ACADEMY OF SCIENCES. V. The Growth of the ACADEMY, 258.
Peirce's (Wilson and Doering), 424.
Penetrating radiation (Condon), 323.
Phenol, proteins in (Cohn and Conant), 433.
Photo-active cells (Murdock), 504.
Photo-electric emission (Hall), 486.
Photo-electric sensitivity of platinum (DuBridge), 162.
Photo-ionization, hydrogen (Mohler), 494.
Photosensitized decompositions by excited mercury atoms (Taylor and Bates), 714.
Physiological principle of minimum work (Murray), 207, 299.
PINCUS, G. See Crozier, W. J., 612.
Pinhole probes (Barus), 224.
Planarians (Rand and Ellis), 570; (Rand and Browne), 575.
Plane, separation of (Moore), 359.
Platinum, photo-electricity (DuBridge), 162.
Pollen abortion (Blakeslee and Cartledge), 315.
Polyatomic molecules, rotation of (Witmer), 602.
Population, social selection (Kerskovits), 587.
Positive ions (Kunsman), 659.
Postulates in history of science (Miller), 538.
Postulates of quantum dynamics (Van Vleck), 385.
Potassium bromide (Allison), 143.
Potassium type atoms (Gibbs and White), 448.
Pressures, acoustic (Barus), 480, 482.
Prime power subgroups (Miller), 470.
Principles of relativity (Slavenas), 739.
Probabilities, transition (Hoyt), 227.
Probes, pinhole (Barus), 224.
Proteins, molecular weights (Cohn and Conant), 433.
Protons in helium (Dempster), 96.
Protozoons, larval (Metcalf), 734.

Quadratic forms (Dickson), 756.
Quanta and interference (Lewis), 439; (Tolman and Smith), 508.
Quantization, space (Kronig), 330.
Quantum dynamics (Van Vleck), 385.
Quantum mechanics (Kronig), 488, 608.
Quantum numbers (Hoyt), 227.
Quantum numbers and molecular rotation (Witmer), 602.

Quantum states of helium molecule, 158.
Quantum theory (Eckart), 684.
Quantum theory (Epstein), 629, 634.
Quantum theory of dielectric (Pauling), 32.
Quantum theory of electrons (Zwicky), 461.
Quantum theory of oscillators (Eckart), 473.

Radial velocities (Frost, Barrett and Struve), 283.
Radiating hydrogen atoms (Hertel), 440.
Radiation and matter (Tolman), 670.
Radiation, cosmic (Condon), 323.
Radiation in relativity (Rainich), 244.
Radiation isotherm (Bruzs), 233.
Radiation, penetrating (Jauncey and Hughes), 169.
RAINICH, G. Y. Mass in Curved Space-Time, 110.
——. Curved Space-Time and Radiation, 244.
RAND, H. W., BOVARD, J. F., AND MINNICH, D. E. Localization of Formative Agencies in Hydra, 565.
RAND, H. W., AND ELLIS, M. Inhibition of Regeneration in Two-Headed and Two-Tailed Planarians, 570.
RAND, H. W., AND BROWNE, A. Inhibition of Regeneration in Planarians by Grafting: Technique of Grafting, 575.
Rays, high frequency (Millikan), 48.
Reacting gases, ionization (Brewer), 560.
Reaction, chemical (Wulf), 129.
Reddish in drosophila (Demerec), 11.
Red shift and relativity (St. John), 65.
Reef-encircled islands (Davis), 99.
Reflections by a crystal (Duane), 140.
Reflection of X-rays (Havighurst), 375, 380.
Relativity doublets (Bichowsky and Urey), 80.
Relativity, principles of (Slavenas), 739.
Relativity, spectral shift (St. John), 65.
Resonance radiation, helium (McCurdy), 231.
Resonant acoustic oscillations (Barus), 137.
Retina (Ladd-Franklin), 413.
RICHTER, C. P. The Significance of Changes in the Electrical Resistance of the Body during Sleep, 214.
ROEBUCK, J. R. The Joule-Thomson Effect in Air, 55.
Rotation of earth (Brown), 406.
Rotational energy of polyatomic molecules (Witmer), 602.
ROUSE, G. F. See Giddings, G. W., 447.
Rubidium-like doublets (Gibbs and White), 551.

ST. JOHN, C. E. The Red Shift of Solar Lines and Relativity, 65.
SALANT, E. O. Infra-Red Absorption of the N—H Bond, 74.
——. On the Heat Capacity of Non-Polar Solid Compounds, 334.
——. The Heat Capacity of Solid Aliphatic Crystals. II, 370.
——. Errata, 419.
SATINA, S., AND BLAKESLEE, A. F. Studies on Biochemical Differences between (+) and (−) Sexes in Mucors. 2. A Preliminary Report on the Manoilov Reaction and Other Tests, 191.
——. Biochemical Differences between Sexes in Green Plants, 197.
——. The Mucor Parasite Parasitella in Relation to Sex, 202.
SAUNDERS, F. A. On the Spectrum of Argon, 556.
SAUNDERS, F. A. See Lyman, T., 92.
Scab, apple (Keitt), 68.
Schroedinger theory (Eckart), 473.
Sciara, chromosomes in (Metz), 690.
Second order systems (Ettlinger), 540.
Segregation, Mendelian (Allen), 2.
Selection, social (Herskovitz), 587.
Selective reflection (Allison), 143.
Selective segregation of chromosomes (diptera) (Metz), 690.
Self-sterility factors (Brieger and Mangelsdorf), 248.
Sets, connected (Gehman), 544.
Sexes (+) and (−) (Satina and Blakeslee), 191.
Sexes in green plants (Satina and Blakeslee), 197.
SHADDUCK, H. A. See Harkins, W. D., 707.
SHERRILL, M. S. See Dickinson, R. G., 175.
SLAVENAS, P. A Possible Way to Discuss the Fundamental Principles of Relativity, 739.
Sleep, electrical resistance during (Richter), 214.
SMITH, S. See Tolman, R. C., 343, 508.
SMYTH, H. D., AND BRASEFIELD, C. J. The Secondary Spectrum of Hydrogen and the Occurrence of H_3^+, 443.
Soap bubbles (Barus), 480.
Social selection in a mixed population (Herskovits), 587.
Sodium fluorides (Havighurst), 380.
Solar atmosphere (Hale), 286.
Solar lines, red shift (St. John), 65.
Space quantization (Kronig), 330.
Space-time, curved (Rainich), 110, 244.
Specific heat, electrolytic (Zwicky), 86.
Spectra, band (Mulliken), 144.
Spectra of stars (Payne), 722.
Spectral lines, intensities of (Tolman and Badger), 173.
Spectrohelioscope (Hale), 286.

Spectrum of argon (Saunders), 556.
Spectrum of iron (Laporte), 496.
Spectrum of krypton (Taylor), 658.
Spectrum of neon (Lyman and Saunders), 92.
Spectrum, secondary, of hydrogen (Smyth and Brasefield), 443.
Spinning electrons (Breit), 451.
Spring break (Barus), 137.
STARKWEATHER, H. W. See Baxter, G. P., 20, 699, 703.
Stars, helium (Frost, Barrett and Struve), 283.
Stars, spectra of (Payne), 722.
Stature and chest-girth (Frassetto), 583.
STERN, C. An Effect of Temperature and Age on Crossing-Over in the First Chromosome of Drosophila Melanogaster, 530.
STOUFFER, E. B. A Simple Derivation of Kronecker's Relation among the Minors of a Symmetric Determinant, 63.
Stratigraphic horizon of lepidocyclina chaperi beds (Vaughan), 519.
Stripped atoms (Gibbs and White), 448, 551, 598, 675.
STRONG, L. C. The Genetic Basis of Susceptibility to Tissue Transplants, 181.
Structure of the 3889 line (McCurdy), 231.
STRUVE, O. See Frost, E. B., 283.
Subgroups of an Abelian group (Miller), 470.
Subsets (Moore), 359.
Subsidence rate (Davis), 99.
Susceptibility to tissue transplants (Strong), 181.
Sylow subgroups (Miller), 269.
Symmetric determinants (Stouffer), 63; (Barton), 393.
Symmetrical polyatomic dipole-gases (Kronig), 608.
Synthesis and disintegration of atoms (Harkins and Shadduck), 707.

TAYLOR, H. S., AND BATES, J. R. Photosensitized Decompositions by Excited Mercury Atoms, 714.
TAYLOR, L. B. The Spectrum of Krypton in the Extreme Ultra-violet, 658.
Thermionic emission (Hall), 486.
Thermionic experiments with positive ions (Kunsman), 659.
Thermodynamics of radiation (Bruzs), 233.
THOMAS, J. M. On Normal Coördinates in the Geometry of Paths, 58.
——. First Integrals in the Geometry of Paths, 117.
——. On Various Geometries Giving a Unified Electric and Gravitational Theory, 187.
——. Conformal Invariants, 389.
THOMAS, T. Y. On Conformal Geometry, 352.
Tissue transplants (Strong), 181.
TOLMAN, R. C. On the Equilibrium between Radiation and Matter, 670.
——, AND BADGER, R. M. A New Kind of Test of the Correspondence Principle Based on the Prediction of the Absolute Intensities of Spectral Lines, 173.
——, AND SMITH, S. On the Nature of Light, 343.
——. Remarks on Professor Lewis' Note on the Path of Light Quanta in an Interference Field, 508.
Transformations of manifolds (Lefschetz), 737.
Transition probabilities (Hoyt), 227.
Transitive groups (Manning), 753.
Transplants of tissue (Strong), 181.
Trophozoites of endamoeba hystolytica (Uribe), 305.
Tropisms of mammals (Crozier and Pincus), 612.
Tubes, bending of (Hovgaard), 365.
Turtles, growth of (Parker), 422.
Two-headed planarians (Rand and Ellis), 570.

Ultra-violet, neon (Lyman and Saunders), 92.
Ultra-violet band spectrum, hydrogen (Witmer), 238.
Ultra-violet spectrum of krypton (Taylor), 658.
UREY, H. C. See Bichowsky, F. R., 80.
URIBE, C. Nuclear Division in the Trophozoites of Endamoeba Histolytica, 305.

VANDIVER, H. S. Summary of Results and Proofs Concerning Fermat's Last Theorem, 106.
——. Summary of Results and Proofs Concerning Fermat's Last Theorem, 767.
VAN VLECK, J. H. . Note on the Postulates of the Matrix Quantum Dynamics, 385.
——. The Dielectric Constant and Diamagnetism of Hydrogen and Helium in the New Quantum Mechanics, 662.
Vapor, mercury, excited (Giddings and Rouse), 447.
Varying mass in a binary (Brown), 1.
Vascular system and the cost of blood volume (Murray), 207.
VAUGHAN, T. W. The Stratigraphic Horizon of the Beds Containing Lepidocyclina Chaperi on Haut Chagres, Panama, 519.

——. Foraminifera from the Upper Eocene Deposits of the Coast of Ecuador, 533.
Vectors, parallelism of (Eisenhart), 757.
Velocity of stars (Frost, Barrett and Struve), 283.
Vigor, hybrid (Castle), 16.
Vital statistics of NATIONAL ACADEMY (Pearl), 258.

Water of lakes (Birge and Juday), 515.
WEBB, T. J. On the Free Energy of Hydration of Ions, 524.
WHITE, H. E. See Gibbs, R. C., 448, 551, 598, 675.
WHYBURN, G. T. Concerning Certain Types of Continuous Curves, 761.
Wilson cloud tracts (Harkins and Shadduck), 707.
WILSON, E. B., AND DOERING, C. R. The Elder Peirce's, 424.
WITMER, E. T. Critical Potentials and the Heat of Dissociation of Hydrogen as Determined from Its Ultra-Violet Band Spectrum, 238.
——. The Rotational Energy of the Polyatomic Molecule as an Explicit Function of the Quantum Numbers, 602.
WULF, O. R. Evidence for the Existence of Activated Molecules in a Chemical Reaction, 129.

X-rays, absorption (Havighurst), 477.
X-rays, reflection (Allison), 143; (Havighurst), 375, 380.

Zeeman effect (Bichowsky and Urey), 80.
Zeeman effect (Epstein), 634.
Zeros of functions (Ettlinger), 540.
ZWICKY, F. Theory of the Specific Heat of Electrolytes, 86.
——. The Quantum Theory and the Behavior of Slow Electrons in Gases, 461.
——. Transfer of Energy from Electrons to Atoms, 466.